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December 12, 2016

Mr. Jeff Walker
Executive Administrator
Texas Water Development Board
1700 North Congress Avenue
P.O. Box 13231
Austin, TX 78711-3231

Via Hand Delivery

Re: Petition Appealing Desired Future Conditions Adopted by Lone Star GCD

Dear Mr. Walker,

Please find attached a petition from the Cities of Conroe and Magnolia, Texas, which was received by the Lone Star Groundwater Conservation District ("District") on December 2, 2016, appealing the desired future conditions adopted by the District. As required by Section 36.1083, Water Code, the District hereby submits this copy of the petition not later than the 10th day after its receipt to the Texas Water Development Board to conduct its review and study as prescribed by the statute.

If you have any questions related to this submission, please do not hesitate to contact me at your convenience.

Sincerely,

Brian L. Sledge
Legal Counsel for the District

Attachment

CC: Ms. Kathy Turner Jones, General Manager
Mr. Richard Tramm, Board President

CITY OF CONROE, TEXAS; CITY OF MAGNOLIA, TEXAS; CITY OF MONTGOMERY, TEXAS,	§	COPY
	§	
***Plaintiffs*,**	§	**PURSUANT TO TEXAS WATER CODE SECTION 36.1083**
	§	
v.	§	
	§	
LONE STAR GROUNDWATER CONSERVATION DISTRICT,	§	
	§	
Defendant.	§	

PETITION OF
THE CITIES OF CONROE AND MAGNOLIA, TEXAS
APPEALING DESIRED FUTURE CONDITIONS OF GMA 14 ADOPTED
BY LONE STAR GROUNDWATER CONSERVATION DISTRICT

To the Lone Star Groundwater Conservation District, by and through its Board of Directors, Richard J. Tramm, Sam W. Baker, M Scott Weisinger P.G., Jim Stinson, P.E., John D Bleyl, P.E., Jace Houston, Roy McCoy, Jr., Rick Moffatt, and W. B. Wood, and General Manager, Kathy Turner Jones, 655 Conroe Park North Drive, Conroe, Texas 77303:

1. The Cities of Conroe and Magnolia, Texas (collectively, the "Cities"), acting pursuant to Texas Water Code Section 36.1083, file the following Petition appealing the Desired Future Conditions ("DFCs") applicable to Groundwater Management Area 14 ("GMA 14") adopted by Lone Star Groundwater Conservation District (the "District") on August 9, 2016. The Cities hereby appeal the District's DFCs because they are unreasonable in all respects. The Cities seek all the rights available to them under Section 36.1083, as well as the Texas and United States Constitutions and other applicable rules of law.

2. Pursuant to Section 36.1083, the District is required to contract with the State Office of Administrative Hearings ("SOAH") to conduct a contested case hearing on the "reasonableness" of the DFCs for Montgomery County, Texas, adopted by the District.

3. The DFCs, proposed by water regulators and their consultants and attorneys who historically have strived to impose more complicated and restrictive regulation of groundwater, and then rubber-stamped by groundwater conservation districts such as the District, will have significant detrimental effects on the Cities, which operate municipal water systems, private property owners who own the groundwater, and all other water users in the area subject to the District's regulatory effects—in this case Montgomery County, Texas. As the Texas Legislature's Sunset Commission foresaw in its December 2010 *Decision on the Texas Water Development Board*, DFCs "can directly affect the amount of groundwater available for use" by landowners and water producers, who then will suffer "significant harm from the loss of available groundwater." That is what Montgomery County faces as a result of GMA 14's DFCs for Montgomery County, which the District adopted without change. If the District's DFCs are not invalidated as unreasonable—as they clearly should be—the District will rely on them to justify continued, and likely even greater, more severe, and unjustified

restrictions on use of the abundant groundwater that underlies Montgomery County for many years to come.

I. BACKGROUND

A. The Cities

4. The City of Conroe is a home-rule municipality located within Montgomery County, Texas. Unlike groundwater conservation districts, as a home-rule city, Conroe derives its powers from the Texas Constitution, not the Legislature. *See, e.g., City of Galveston v. State*, 217 S.W.3d 466, 469 (Tex. 2007); *State v. Portillo*, 314 S.W.3d 210, 214 (Tex. App.—El Paso 2010, no pet.) ("powers of home-rule city encompass all of the powers of the state not inconsistent with the Constitution, the general laws, or the city's charter"). Article XI, § 5 of the Texas Constitution was intended to give home-rule cities "full authority to do anything the legislature could theretofore have authorized them to do." *Forwood v. Taylor*, 214 S.W.2d 282, 286 (1948). Home-rule cities have "full power of self-government" and only look to the legislature for limitations on those powers. *Forwood*, 214 S.W.2d at 286. Since a home-rule city has such broad, constitutionally-granted power, it then follows that a state agency may not abrogate those rights without consequence.

5. Conroe is the largest city within Montgomery County and one of the fastest-growing cities of its size in the United States. There are reliable estimates

that by 2030, Montgomery County will have one million residents, many of whom will live in Conroe. The Conroe city government is responsible for providing ample supplies of water, at reasonable costs, to its current and future residents. Although the District's regulations now force Conroe to purchase more than half its water from the San Jacinto River Authority, Conroe is still the second largest producer of groundwater in Montgomery County. As a result of the District's restrictions of Conroe's groundwater production, the water bills of Conroe's residents have nearly doubled in the past year. Conroe owns water wells that are permitted by the District, as well as land and water rights within Montgomery County. Conroe is an "affected person" as defined in 31 T.A.C. § 356.10(1).

6. During the GMA 14 DFC process, Conroe sought to be heard. For examples, it sent the letter dated May 5, 2015, signed by its then-Mayor and approved by its City Council,[1] and the report, titled "Evaluation of Desired Future Conditions for the Gulf Coast Aquifer within GMA 14," dated September 2015,[2] to the representatives of all groundwater conservation districts comprising GMA 14. Nothing that Conroe (or any other participants in the GMA 14 process except the professional groundwater regulators and their pro-regulation consultants) said or did had any effect on GMA 14's DFCs.

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[1] *See* Exhibit B attached hereto and incorporated by reference.

[2] Exhibit K to this Petition is the Affidavit of Robert D. Harden ["Harden Affidavit"]. The Cities incorporate by reference, as if set forth verbatim herein, the Harden Affidavit, including all attachments thereto. The above-referenced September 2015 report was authored by Mr. Harden; a true and correct copy of that report is attached as Exhibit 4 to the Harden Affidavit.

7. The City of Magnolia is a smaller, but also fast-growing, city located within Montgomery County. Magnolia continues to supply its residents with water produced from water wells. Nevertheless, due to the District's regulations, which have caused Magnolia to have pay large (and increasing) "pumpage fees" to the San Jacinto River Authority, Magnolia's water bills to its citizens have also nearly doubled. Magnolia owns water wells that are permitted by the District, as well as land and water rights within Montgomery County. Magnolia is an "affected person" as defined in 31 T.A.C. § 356.10(1).

B. The District and GMA 14

9. The District is a groundwater conservation district that is subject to Chapter 36 of the Texas Water Code and that has jurisdiction over Montgomery County only. No major aquifer underlying Montgomery County is confined to Montgomery County only. Indeed, the three major aquifers—the Jasper, Chicot, and Evangeline—underlie all or parts of numerous counties in the Northern Texas Gulf Coast area. The aquifers know nothing about county lines on the surface. Groundwater freely flows across county boundaries, and pumping in one county affects the aquifers in other counties, some of which have their own groundwater conservation districts, but some do not.

10. Although the District has never grasped this fact, it is a governmental unit with limited powers. Unlike Conroe, a home rule city, the District's powers

are limited to those expressly enumerated in its governing statutes, and it may exercise only the authority the Legislature clearly granted to it. *See, e.g., Tri-City Fresh Water Supply Dist. No. 2 v. Mann*, 142 S.W.2d 945, 948 (Tex. 1941); *S. Plains Lamesa RR, Ltd. v. High Plains Underground Water Conservation Dist. No. 1*, 52 S.W.3d 770, 776 (Tex. App.—Amarillo 2001, no pet.).

11. Recognizing the folly of allowing individual, often-single county, groundwater conservation districts to attempt to develop DFCs for aquifers underlying much larger areas, the Legislature provided for joint planning in groundwater management areas ("GMAs") delineated by the Texas Water Development Board ("the Board" or "TWDB") as "areas suitable for management of groundwater resources." TEXAS WATER CODE § 35.004(a). Presently, the Board has designated sixteen GMAs, each covering a different aquifer, distinct part of an aquifer, or a group of aquifers serving a particular part of the State.

12. One of those GMAs is GMA 14, which covers the major aquifers in the large area of Texas known as the Northern Gulf Coast Aquifer System. The area covered by GMA 14 includes all of the following counties: Austin, Brazoria, Chambers, Fort Bend, Galveston, Grimes, Hardin, Harris, Jasper, Jefferson, Liberty, Montgomery, Newton, Orange, Polk, San Jacinto, Tyler, Walker, Waller, and Washington. Groundwater conservation districts within a GMA are required to designate a representative of that district to the GMA. For example, the District

designated its executive director, Ms. Kathy Turner Jones, to represent it on GMA 14. During GMA 14's recent DFC process, Ms. Jones served as GMA 14's presiding officer, and GMA 14 held most, if not all, of its meetings at the large, new headquarters building the District built for itself in Conroe.

13. The Legislature assigned GMAs the task of proposing DFCs "for the relevant aquifers within the management area." TEXAS WATER CODE § 36.108(d). The DFCs proposed were supposed to "provide a balance between the highest practicable level of groundwater production and the conservation, preservation, protection, recharging, and prevention of waste of groundwater and control of subsidence in the management area." TEXAS WATER CODE § 36.108(d-2). As will be explained below and in the contested case hearing requested by this Petition, the District's adopted DFCs completely failed to carry out this joint planning task.

C. The DFCs

14. GMA 14 ultimately proposed,[3] and the District adopted, two sets of DFCs for each of the major aquifers serving Montgomery County. (*See* Resolution #16-006, attached hereto as Exhibit A). GMA 14's process did not start out to produce two sets of DFCs. Directly contrary to its mandate under the Water Code, GMA 14's consultants appear to have run a computer simulation named the "Houston Area Groundwater Model" to calculate DFCs for each aquifer on a

[3] GMA 14's Resolution 2016-01 is attached to this Petition as Exhibit G.

county-by-county basis, and then later in its process did something to consolidate or average the county-by-county DFCs to come up with DFCs for the aquifers underlying GMA 14 as a whole. The Cities will need to take discovery from GMA 14's consultants to understand what they did in greater detail. The Desired Future Conditions Explanatory Report ["Explanatory Report"] authored by GMA 14's consultants seems intentionally vague about the exact processes they followed.

15. To illustrate the impracticability of the DFCs GMA 14 proposed, and the District adopted, for Montgomery County, consider the following table which compares, for the Jasper Aquifer, the DFCs proposed for (a) GMA 14 as a whole, (2) Montgomery County, and (3) the counties contiguous to Montgomery County for which separate DFCs were established. Note that no limiting DFC was established for Harris County, the most populous county within GMA 14, and the contiguous county with the longest border with Montgomery County. All of these DFCs are stated as being from "estimated year 2009 conditions," and are expressed as "not-to-exceed average drawdowns in approximate feet after 61 years:"

Jasper Aquifer

All of GMA 14	66.2
Montgomery County	34
Liberty County	120
Harris County	No DFC
Walker County	42
Grimes County	52

Walker County	42
San Jacinto County	108

16. As is obvious, Montgomery County, the most populous and fastest-growing county for which GMA 14 proposed a single-county DFC for the Jasper Aquifer, has the most restrictive DFC of any of its contiguous counties. In neighboring Liberty County, for example, groundwater producers may produce sufficient groundwater to draw the Jasper aquifer down 120 feet over the 61-year period; but for producers in Montgomery County, the District will regulate to prevent average drawdown in the Jasper greater than 34 feet over the same period. There is no barrier in the Jasper along the border between Montgomery and Liberty Counties. Nothing prevents the Jasper underlying Montgomery County from being drained by pumping in Liberty County, and the same is doubly true of pumping in contiguous Harris County, for which GMA 14 did not establish single county DFCs.

17. To illustrate the absurdity of the DFC for all of GMA 14 as a whole, if one takes the simple arithmetic average of the Jasper DFCs for the six counties shown in the table above, the answer is 66.3, very close to the supposed GMA 14 DFC of 66.2. But that "average" is meaningless. The single-county DFCs for the Jasper Aquifer range from 34 to 120. If the 66.2 all-GMA DFC were meaningful, there would be no reason why it could not serve as the DFC for the Jasper for Montgomery County rather than the more restrictive single-county DFC of 34 feet.

If the Montgomery County DFC limiting drawdown to 34 feet in the Jasper is not invalidated, the District will continue to adopt rules written to achieve that restrictive DFC within Montgomery County, without regard to the DFC for GMA 14 as a whole, and without regard to the resulting drainage of Jasper Aquifer water, which is the private property of Montgomery County landowners, to other counties surrounding Montgomery County.

18. Similar analyses can be done for the other major aquifers underlying Montgomery County—the Chicot and Evangeline. For examples, the DFC for Montgomery County for the Chicot is an average 26 feet drawdown in 61 years, and for the Evangeline is actually an average 4 feet increase in levels over the next 61 years. But Waller County, contiguous to Montgomery, has DFCs allowing 39 feet of average drawdown over 61 years in both aquifers. The DFCs for neighboring Liberty County allow average drawdowns of 27 feet in the Chicot and 29 feet in the Evangeline. Again, the movement of groundwater through these aquifers is not influenced by county boundary lines.

19. Thus, the approach followed by GMA 14 in setting county-by-county DFCs, which the District adopted for Montgomery County, explicitly ignores the fact that groundwater is moving between groundwater conservation districts and the counties of GMA 14. This movement of groundwater between groundwater conservation districts means that no one district in GMA 14 can actually "manage"

the groundwater, including the protection of property rights of all owners overlying the common reservoir, without considering the geohydrologic conditions of the aquifers, the natural and lateral boundaries present, and the effects of production. The District has consciously ignored undisputed hydrological facts to reach the disparate DFCs it adopted.

20. GMA 14 did not propose a DFC for subsidence in Montgomery County, and the District did not adopt one, although such DFCs were established for some of the contiguous counties. With a few localized exceptions along the border between Harris and Montgomery Counties, subsidence is not an issue in Montgomery County, and it is no issue at all for the Jasper Aquifer.

II. SUMMARY OF WHY THE DFCS ARE UNREASONABLE

21. In this section of this Petition, the Cities will summarize, in general, the major reasons why the DFCs adopted by the District are unreasonable. In later sections of this Petition, the Cities will plead with greater particularly and identify evidence they now have that the DFCs are unlawful, confiscatory, and otherwise unreasonable. The Cities seek to take discovery prior to the contested case hearing on unreasonableness. In summary form, the DFCs are unreasonable for at least each of the following reasons. The Cities reserve the right to expand on these reasons and prove additional reasons after discovery, and in the contested case hearing.

A. <u>The Water Code does not authorize DFCs based on county boundaries absent proof that county boundaries have a scientific relationship to the aquifers</u>.

(1) The Texas Water Code does not authorize GMA 14 or the District to adopt or enforce DFCs on a county-by-county basis, based on county lines which have no scientific relationship to the underlying aquifers. It makes no logical—and certainly no scientific—sense to restrict Montgomery County to restrictive DFCs and resulting severe groundwater production limits, when its contiguous counties, served by the same aquifers, have far less restrictive DFCs. The inevitable result will be unlawful confiscation, *i.e.*, the government's taking of private property from Montgomery County groundwater owners and the giving of that property to owners in adjacent counties. This is prohibited by the Constitution, and thus unreasonable. *See, e.g., Marrs v. Railroad Commission*, 177 S.W.2d 941 (Tex. 1945) (government must treat owners of oil and gas in the same reservoir equally).

(2) Contrary to the exceedingly weak arguments in the Explanatory Report, there is no authority in the Water Code for DFCs on a county-by-county basis, with no showing of a scientific relationship between county boundaries and any characteristics or conditions of the underlying aquifers.

(3) The governing statute, Texas Water Code § 36.108(d-1), states that "the districts [in a GMA] may establish different desired future conditions for:

(1) each aquifer, subdivision of an aquifer, or geologic strata located in whole or part within the boundaries of the management area; or

(2) each geographic area overlying an aquifer in whole or part or subdivision of an aquifer within the boundaries of the management area."

(4) Section 36.108(d-1) intends DFCs to be based on hydrological or geological conditions or characteristics of groundwater reservoirs so that reservoirs may be scientifically managed, not on political subdivision lines that have nothing to do with reservoir boundaries, conditions, or characteristics. The statute does not contain the phrase "political subdivision," even though the Legislature defined that phrase twice in Chapters 35 and 36 of the Texas Water Code, and knows how to use it when it means "political subdivision." *See* TEX. WATER CODE §§ 35.002(13), 36.001(15). Had the Legislature intended that DFCs could be established for "political subdivisions," it would have said so, but it did not because it makes no sense to establish DFCs on a "political subdivision" basis. *E.g., In re Ament*, 890 S.W.2d 39, 41 (Tex. 1994) ("In a 'statutory construction' sense, omissions [] are presumed to be intentional.").

(5) The Explanatory Report claims the phrase "each geographic area overlying an aquifer in whole or part" authorizes GMAs, and thus the District, to establish DFCs on a county-by-county basis. The argument is wrong for at least three reasons. *First*, this argument proves too much. If GMAs, composed of its

district members, can arbitrarily select counties as a "geographic area," presumably they could select city boundaries, U. S. Postal Service ZIP Codes, or any other areas on the surface that have no scientific relationship to the subject matter of a DFC—aquifers. GMA 14's argument would render the rest of Texas Water Code § 36.108(d-1) meaningless. Under this supposed interpretation of "geographic areas," GMAs could base DFCs on any surface area.

(6) *Second*, the Board's staff has said, in a written directive, that DFCs may be established on the basis of the boundaries of political subdivisions only if those boundaries happen to coincide with "substantial and discernable differences in uses or conditions" within the GMA. (*See* Memorandum to Members of the Texas Water Development Board from the Board's Director of Groundwater Resources and General Counsel, March 10, 2010, submitted herewith as Exhibit H). The Board staff continued: "It should be emphasized that employing geographic areas that are not based on clear and substantial differences in uses or aquifer conditions is not supportable, regardless of how those geographic areas are drawn," and that GMAs cannot use "county or other political subdivision lines to gerrymander DFCs for purposes other than accommodating discernable, substantial differences in uses or aquifer conditions with the GMA." (*Id.* at 2-3). Of course, there is nothing in the Explanatory Report showing or even suggesting that GMA 14, or the District, attempted to identify "discernable, substantial differences in

uses or aquifer conditions" at all, much less any effort to establish that those differences happen to coincide with the boundaries of the twenty counties within GMA 14.

(7) *Third*, Mr. William F. Mullican, III, a consultant who apparently was the principal author of the Explanatory Report, elsewhere has defined "geography" for the purpose of elucidating "geographic area" within Section 36.108(d-1)(2) as "the physical characteristics, especially the surface features, of an area."[4] In a widely-distributed paper, Mr. Mullican and his co-authors did not suggest that county or other political subdivision boundaries could be used as a "geographic area overlying an aquifer in whole or part" under the statute.

B. <u>The DFCs fail to protect, and in fact will destroy, private property rights</u>.

(1) In Texas, groundwater is a protected private property interest. Landowners, including the Cities, own absolute title to groundwater in place beneath the land they own. *Edwards Aquifer Authority v. Day*, 369 S.W.3d 814, 831-32 (Tex. 2012). Chapter 36 of the Texas Water Code, from which the District derives its existence and authority, expressly recognizes and adopts the common law rule vesting ownership of groundwater in landowners. TEX. WATER CODE § 36.002. Section 36.002 states in pertinent part that a landowner, including lessees

[4]R. Mace, R. Petrossian, R. Bradley, W. Mullican & L. Christian, *A Streetcar Named Desired Future Conditions: The New Groundwater Availability for Texas (Revised)* at 4 n.24 (May 8-9, 2008).

and assigns, "owns the groundwater below the surface of the landowner's land as real property'' and that "[n]othing in this code shall be construed as granting the authority to deprive or divest a landowner, including a landowner's lessees, heirs, or assigns, of the groundwater ownership and rights described by this section." TEXAS WATER CODE § 36.002(a), (c).

(2) By statute, the districts in GMA 14, including the District, are required to consider the impact of proposed DFCs on private property, including ownership and the rights of management area landowners and their lessee and assigns in groundwater. TEXAS WATER CODE § 36.108(d)(7). As discussed more particularly in Section IV below, the District failed to consider the impact of proposed DFCs on private property, including ownership and the rights of management area landowners and their lessee and assigns in groundwater. The adopted DFCs will damage or destroy private property. The District may not regulate as if it owns the Gulf Coast Aquifer lying beneath Montgomery County or that its mandate is to apportion rights to withdraw water from that aquifers. The District should recognize, but clearly does not, that it may regulate, but does not own, and cannot by regulation destroy, private real property rights in groundwater.

(3) The District's DFCs for Montgomery County are based on the District's self-imposed, reverse-engineered 64,000 acre-feet per year production restriction (explained in greater detail below). This artificial restriction on

groundwater production, lacking any legitimate technical or scientific basis, is not a reasonable method of groundwater management because it destroys the market for water rights in Montgomery County and thereby destroys the value of privately-owned groundwater rights through the District's borders. Landowners are entitled to sever water rights from their land and sell those rights to others; thus, water rights can have substantial value to private landowners. In the ordinary course, for example, if the Cities needed additional groundwater to serve their residents, they could negotiate a purchase of, or exercise eminent domain to acquire, additional water rights and then drill new, permitted wells to produce groundwater. The District's DFCs preclude the Cities from satisfying their residents' need for additional water by purchasing water rights. If prospective buyers of groundwater rights are prohibited, by government regulation, from purchasing groundwater rights, government has thereby destroyed the value of potential sellers' groundwater rights. Government may not destroy the market for groundwater rights without thereby destroying the value of the water rights.

C. GMA 14 did not consider, and affirmatively disregarded, the Board's Report on the Total Estimated Recoverable Storage of aquifers within GMA 14.

Section 36.108(d)(3) of the Texas Water Code expressly *requires* GMAs to consider "hydrological conditions, including for each aquifer in the management area the total estimated recoverable storage as provided by the executive

administrator" of the Board. Board regulations define "total estimated recoverable storage" ("TERS") as "the estimated amount of groundwater within an aquifer that accounts for recovery scenarios that range between 25% and 75% of the porosity-adjusted aquifer volume." 31 T.A.C. §356.10(23). On June 9, 2014, the Board published its report titled "GAM Task 13-037: Total Estimated Recoverable Storage for Aquifers in Groundwater Management Area 14." (*See* Exhibit I hereto). But despite the statutory requirement that GMA 14 "shall consider" the Board's TERS, GMA 14 declared TERS irrelevant to its contrived process for developing DFCs and in stark violation of Section 36.108(d)(3), paid TERS no attention. GMA 14's Explanatory Report states that "TERS has no practical application in the GMA 14 joint-planning process or in groundwater management of the Gulf Coast Aquifer System." (Explanatory Report at 81). The District's DFCs are unreasonable because the District declared irrelevant one of the nine mandatory statutory factors.

D. <u>GMA 14's backwards, reverse-engineered approach is not based on the best available science and fails to meet the statutory criteria.</u>

(1) The DFCs approved by GMA 14, and later adopted by the District, are not based on the best available since relating to the Gulf Coast Aquifer. The DFCs for Montgomery County are supposedly based on computer simulation models but, when examined in greater detail, were truly "reverse engineered" in order to

contrive DFCs that justify the District's unscientific and terribly-misguided obsession to restrict groundwater production in Montgomery County to 64,000 acre-feet per year. Although the original basis for the District's 64,000 acre-feet limitation is uncertain and has been difficult to determine, the District has enshrined that number in each of its Groundwater Management Plans. The District's recharge estimate appears to be based on a simplistic calculation of rainfall that makes its way to each acre of surface over of the aquifers multiplied by the acres in the county, without regard for the size of the recharge zones of the separate aquifers or inflows from other counties.

(2) During GMA 14's DFC process, it appears that the District provided its 64,000 acre-feet limitation to GMA 14's consultants and instructed those consultants to propose DFCs for Montgomery County that justify the District's continued use of that number. For examples, the minutes of GMA 14's meeting for June 26, 2013, attached to GMA 14's Explanatory Report, state that a GMA 14 consultant "pointed out that to adjust the pumpage to match a particular DFC would be very work intensive," and "[t]he more direct method would be to review the pumpage figures and projected demands for each entity and once agreed upon, put those numbers into the model and determine the resulting DFCs." (*See* Harden Aff. at Ex. 9 thereto). That is apparently what the consultants did. The minutes of GMA 14's meeting for April 30, 2014, also attached to the Explanatory Report,

report that "Lone Star GCD wishes to pursue an additional model run to better align the pumpage package with the currently regulatory plan for the district." (*See* Harden Aff. at Ex. 10 thereto). The DFCs, born from the District's self-imposed and arbitrary restriction of groundwater production in Montgomery County to 64,000 acre-feet per year, lack any technical basis. (*See* Harden Aff. at ¶ 19).

(3) The Explanatory Report is a futile attempt to mask the true nature of the District's reverse-engineered DFCs. While the origin of the District's DFCs is well-documented as being the District's supposed annual recharge estimate (*i.e.*, 64,000 acre-fee per year), the Explanatory Report seeks to support the DFCs for Montgomery County based on different (albeit equally unsupported and conclusory) justifications. GMA 14's consultants claim in the Explanatory Report, without any supporting evidence or study, that "[w]ithout preservation of [] artesian pressure, the costs of drilling a well, equipping the well, lifting the water to the surface, the huge impacts to well yields, and in some cases water quality degradation would simply render the option of a water well economically infeasible to most landowners as a source of water supply." (Explanatory Report at 29). So GMA 14, which includes the District, is hanging its hat on "economics" with the claim that further reduction of artesian pressure would require "huge" costs, but GMA 14 offers no actual science. For instance, it makes no comparison of aquifers. The Jasper has much more artesian pressure than the Evangeline.

There is no legitimate hydrologic or engineering reason why the Jasper production should be reduced like the Evangeline. Based on "artesian pressure," these two aquifers should be regulated independently. The focus on maintaining artesian pressure for the benefit of some (principally existing) well owners results in confiscating the private property interest in groundwater from many in order to confer a speculative benefit on only some.

III.
THE DISTRICTS OF GMA 14, INCLUDING THE DISTRICT, IMPROPERLY ESTABLISHED MULTIPLE DFCs FOR THE SAME AQUIFERS

22. Under the Texas Constitution, the District has only those limited powers as were conferred to it by its enabling statute. TEX. CONST. Art. XVI, §59(b); *accord Tri-City*, 142 S.W.2d at 948; *S. Plains Lamesa*, 52 S.W.3d at 776.

23. Contrary Section 36.108(d) of the Texas Water Code, and contrary to GMA 14's own administrative rules, the groundwater conservation districts of GMA 14 (including the District) adopted multiple DFCs for the same aquifers within GMA 14, based on political subdivision lines rather than aquifer subdivisions or conditions. Such DFCs are unreasonable because (1) DFCs that vary from county to county over the same aquifer violate the statutory directives for establishing DFCs; (2) TWDB staff has previously issued a memorandum discouraging DFCs based solely on political subdivisions (*see* Ex. H); and (3) the DFCs violate GMA 14's own administrative rules (*see* Ex. F). Most importantly,

(4) DFCs based on county boundaries lack any scientific relationship to the aquifers.

24. As discussed in Section IV, below, multiple DFCs for a single aquifer will ultimately result in disparate and unequal rules and regulatory requirements that deprive groundwater rights owners of their right to a fair opportunity to produce a fair share of the groundwater in the relevant aquifers.

A. Aquifer Management Should Be Regional In Nature.[5]

25. GMA 14 includes several different aquifers of the Gulf Coast Aquifer System. These aquifers are not confined to the area encompassed by the boundaries of the District, and the boundaries of the District (the political lines outlining Montgomery County) are not coterminous with the boundaries of any of such aquifers. (*See* Ex. K, Harden Affidavit ¶¶ 8, 11-15, 17, 18 & Exs. 4 & 5 thereto.). None of the groundwater conservation districts of GMA 14 completely encompasses any of the aquifers in the management area of GMA 14, and no groundwater conservation district in GMA 14 has boundaries coterminous with the boundaries of any such aquifers. (*Id.*)

26. Withdrawals of groundwater from the aquifers of the Gulf Coast aquifer system outside the boundaries of the District can and will affect the groundwater resources inside the boundaries of the District. (*Id.*) Therefore,

[5] *See* Ex. K, Harden Aff. at ¶ 8.

production from any of the Gulf Coast aquifers under Montgomery County will affect groundwater in adjacent counties, and production from any of those aquifers under any adjacent counties will impact groundwater in Montgomery County. (*Id.*) The District cannot change that hydrological fact.

27. On April 29, 2016, the groundwater conservation districts of GMA 14 (including the District) adopted the DFCs reflected in Resolution 2016-01-01, a copy of which is attached as Exhibit G hereto. In Resolution 2016-01-01, the groundwater conservation districts of GMA 14 claimed to adopt a single DFC for each relevant aquifer across the entire breadth of GMA 14, but also adopted different and separate DFCs for each relevant aquifer in each separate county encompassed in GMA 14.[6] As an example, the Jasper Aquifer in Montgomery County and Liberty County has two DFCs, described in terms of "average draw down" from estimated 2009 conditions after 61 years:

County	County DFC	GMA-Wide DFC
Montgomery	34	66.2
Liberty	120	66.2

28. Montgomery and Liberty Counties are adjacent to one another. There is no aquifer subdivision or other hydrological barrier in the Jasper Aquifer as it exists between Montgomery and Liberty Counties. Production of groundwater on

[6] The GMA 14's documentation establishes that the improper "county-based DFCs were first determined and only in an attempt to refute criticism" did they add language to the resolution regarding GMA-wide DFCs. (Ex. K, Harden Aff. at ¶ 24).

one side of the county line will affect groundwater on the other side. There is no groundwater conservation district in Liberty County, and there are no production limits or spacing and density rules that apply to that county. And the future water demands are unquestionably much greater in Montgomery County than in Liberty County.

B. The DFCs Are Contrary To The Intent Of § 36.108.

29. The differing county-specific DFCs adopted by the District violate the statutory direction for DFCs. Section 36.108(d-1) of the Texas Water Code, provides:

> (d-1) The districts may establish different desired future conditions for:
>
> (1) each aquifer, subdivision of an aquifer, or geologic strata located in whole or in part within the boundaries of the management area; or
>
> (2) each geographic area overlying an aquifer in whole or in part or subdivision of an aquifer within the boundaries of the management area."

30. The groundwater conservation districts of GMA 14, including the District, have violated the provisions of Texas Water Code Section 36.108(d-1) by adopting different DFCs for each aquifer in each of the counties in GMA 14. There are no identified aquifer subdivisions in any of the aquifers of the Gulf Coast Aquifer System. Specifically, there are no identified subdivisions in the Jasper

Aquifer, no identified subdivisions in the Evangeline Aquifer, no identified subdivisions in the Chicot Aquifer, and no identified subdivisions in the Burkeville confining unit. (*See* Ex. K, Harden Aff. ¶¶ 13-15 & Ex. 5 thereto). There are no identified geographical areas overlying the aquifers as they relate to unique or specific natural conditions that would affect groundwater. The DFCs established for GMA 14 are tied strictly to political subdivision lines which do not delineate substantial and discernible differences in uses or conditions of these aquifers, either coincidentally or otherwise. (*Cf.* Ex. H, TWDB Memo). The DFCs adopted by the districts of GMA 14 are based entirely on political subdivision lines, and the aquifers do not "see" those political lines. The District is not authorized by the Texas Water Code to adopt DFCs based only on political subdivision lines.

31. The District's different DFC for the Jasper in Montgomery County is not based on substantial and discernible differences in uses or conditions as between Montgomery and Liberty Counties, but on the stated objective of the District to limit groundwater production to what it mistakenly claims to be a "sustainable" amount equal to the supposed recharge to the portions of aquifers within Montgomery County. *See, e.g.,* Lone Star Groundwater Conservation District Groundwater Management Plan adopted October 14, 2003 at p. 8 ("The estimated annual amount of recharge to the groundwater resources of the District is

64,000 acre-feet per year.");[7] Lone Star Groundwater Conservation District Groundwater Management Plan adopted October 14, 2008 at p. 7 ("However, in 2003, the District adopted in its Management Plan an available useable groundwater amount of 64,000 acre-feet per year.");[8] Lone Star Groundwater Conservation District Groundwater Management Plan adopted November 12, 2013 at p. 6 ("Pursuant to the District Rules and this management plan, the District shall seek to limit production of groundwater from the resources within its boundaries to a sustainable level, so that the groundwater resources of Montgomery County are not depleted for future generations. For purposes of this plan, the word 'sustainable' means limiting total groundwater production in the District or in a management zone designated by the District to an amount that does not exceed the amount of effective deep aquifer recharge available in the District or the management zone, as applicable when averaged over a term of years to be determined by the District.").[9]

32. This "sustainable amount" of 64,000 acre-feet per year has been in the District's management plan (and implementing rules) since well before any DFCs were ever mandated by the Legislature or adopted by the District. The 2016 DFC

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[7] Available at http://lonestargcd.org/wp-content/uploads/2014/09/031014-Final-Adopted-Management-Plan-BS.pdf (last visited September 22, 2016).

[8] Available at http://lonestargcd.org/wp-content/uploads/2014/09/031014-Final-Adopted-Management-Plan-BS.pdf (last visited September 22, 2016).

[9] Available at http://lonestargcd.org/wp-content/uploads/2014/09/Lone-Star-Mgmt-Plan-Update-2013-FINAL.pdf (last visited September 22, 2016).

for the Jasper Aquifer of no more than 34 feet of drawdown over the next 60 years is based solely on the District's desire to limit groundwater production in Montgomery County to an amount equal to the recharge, *i.e.,* 64,000 acre-feet per year. The Jasper DFC is therefore not based on the factors set forth in Section 36.108(d-1), but on a decision made long ago, before the Legislature created the requirement for DFCs. Basing DFCs on a political or non-scientific feelings rather than the factors set forth in Texas Water Code Section 36.108(d) is pure pretense, and unreasonable as a matter of law.

33. Not only is the District's recharge calculation arbitrary and wrong, it is not based on, or equate to, "substantial and discernible difference in uses or conditions" of the aquifers. (*See* Ex. K, Harden Aff. at ¶ 19) The resulting DFCs for each aquifer are simply "reverse-engineered" to meet the above-stated political objective of the District. (*Id.*) Basing DFCs on political subdivision lines is unreasonable where political subdivision lines do not reflect substantial and discernible differences in uses or conditions of an aquifer.

34. The DFC chosen for the Jasper aquifer within Montgomery County (*i.e.,* under the District) ignores the effects of recharge from the Jasper outcrop outside of Montgomery County. (*Id.* at ¶¶ 15, 18 & Exs. 5 & 7-8 thereto). It is scientifically undeniable that the Montgomery County Jasper is recharged from an

area of Jasper outcrop that far exceeds the 4,300 acres of outcrop that actually exists in Montgomery County.

C. The DFCs Are Contrary To TWDB's Opinions.

35. On March 10, 2010, the TWDB staff prepared a memorandum to its board discussing the use of "geographic areas" in establishing DFCs. (*See* Ex. H hereto). In that memorandum, TWDB Director of Groundwater Resources William R. "Bill" Hutchison and General Counsel Kenneth L. Petersen presented the issue whether districts in a GMA may delineate different "geographic areas" within the GMA by use of political subdivision boundaries. (*Id.*) Messrs. Hutchison and Petersen advised the TWDB that such practice was defensible only if the political subdivision boundaries happened to coincide with "substantial and discernible differences in uses or conditions" within the GMA. (*Id.*) TWDB's memorandum continues: "It should be emphasized that employing geographic areas that are not based on clear and substantial differences in uses or aquifer conditions is not supportable, regardless of how those geographic areas are drawn." (*Id.*)

36. Accordingly, the DFCs adopted by the District are unreasonable because they fail to adhere to TWDB's guidance; Texas Water Code Sections 36.102, 36.108(d-1); and *Marrs v. Railroad Commission*, 177 S.W.2d 941 (Tex. 1944).

37. Section 4.3 of the Explanatory Report relies on Texas Water Code Section 36.108(d-1) to justify GMA 14's disparate DFCs for the same aquifer, claiming the Legislature intended to allow groundwater conservation districts to establish different DFCs based on political subdivision boundaries. To the extent that Section 36.108(d-1) is construed to allow arbitrary lines to be drawn across an aquifer for regulatory purposes, that legislation would be unconstitutional. *See Marrs, supra.* Texas courts are instructed to avoid construction of a statute that would render the statute unconstitutional. *City of Houston v. Clark*, 197 S.W.3d 314, 320 (Tex. 2006); *Brady v. Fourteenth Court of Appeals*, 795 S.W.2d 712, 715 (Tex. 1990); TEXAS GOV'T CODE § 311.021.

D. <u>The DFCs Are Contrary To GMA 14's Administrative Rules.</u>

38. The groundwater conservation districts of GMA 14 adopted certain administrative procedures for the consideration, proposal, and adoption of DFCs for GMA 14 ["GMA 14 Administrative Procedures"]. (*See* Exhibit F hereto). Included in the GMA 14 Administrative Procedures are the following sections:

> Section 2.04 The GMA 14 Member Districts, as a group to engage in joint planning activities, shall have only the power granted by Chapter 36, Water Code, that relates to joint planning activities.
> ***
> Section 3.05 Only after consideration of the nine statutory factors as stated in Section 3.04 may a DFC option become eligible for approval as the proposed DFC. **For each relevant aquifer** in GMA 14, the Member District Representatives shall approve by two-thirds vote of the total Member District Representatives **one DFC option** to serve as the proposed DFC as required by Sections 36.108(d) and (d-2), Water Code. The proposed DFC

> must provide a balance between the highest practicable level of groundwater production and the conservation, preservation, protection, recharging, and prevention of waste of groundwater and control of subsidence in GMA 14. (Emphasis added).

(Ex. F) (emphasis added).

39. In undertaking to define different DFCs for each aquifer under certain county boundaries within GMA 14, the districts, including the District, have violated Section 2.04 of the GMA 14 Administrative Procedures specifying that the Districts have only the power granted by Chapter 36 of the Texas Water Code that relates to joint planning activities.

40. The groundwater conservation districts of GMA 14, including the District, have violated Section 3.04 of the GMA 14 Administrative Procedures by adopting more than one DFC for each relevant aquifer within GMA 14.

41. Adopting two DFCs for each relevant aquifer in each county prevents each groundwater conservation district from complying with the requirements of Texas Water Code Sections 36.1085 and 36.1132, which requires each district to achieve the DFC for each aquifer.

42. Adopting two DFCs for each relevant aquifer also prevents the TWDB from designating the "modeled available groundwater" for each relevant aquifer pursuant to Texas Water Code Section 36.1084.

43. Section 4.3 of the Explanatory Report attempts to disguise the reality that GMA 14 adopted different DFCs based on county lines. That section states

that only one DFC was adopted for each relevant aquifer in GMA 14, and the average drawdown for each county was then calculated. The Explanatory Report claims that the DFCs adopted for each aquifer in each district were not DFCs at all, but just a calculated average of GMA-wide DFCs. However, the Explanatory Report at Section 3.0 sets forth the adopted DFCs for both GMA 14 and for the individual counties in GMA 14, expressing all DFCs in identical language, and states that the county DFCs are "...to better facilitate the management and conservation of groundwater resources at the individual GCD level..." If only one DFC has been adopted by GMA 14 for the Jasper Aquifer, then the District must amend its rules to allow groundwater owners in Montgomery County to produce an amount of groundwater up to the point that the total volume of exempt and permitted groundwater production could cause 66.2 feet of drawdown in the Jasper Aquifer over the next 61 years. TEXAS WATER CODE § 36.1132. The District has not done so, but has persisted in imposing restrictions that would allow only 34 feet of drawdown in that aquifer over that period.[10]

44. Because all the districts of GMA 14 have different rules, and because the county-level DFCs were reverse-engineered to reflect local political decisions (*see, e.g.*, Ex. K, Harden Aff. at ¶ 19 & Exs. 9-10 thereto), the statement in the

[10] The "two sets of DFCs inspire confusion" (Ex. K, Harden Aff. at ¶ 24). "If all of the GMA 14 county-based DFCs are achieved, then the GMA-wide DFC must be achieved by simple application of mathematics. But, the reverse is not true. *** Achieving the GMA-wide DFC does not ensure achieving each county-based DFC. Therefore ... the GMA-wide DFC is meaningless for regulatory purposes." (*Id.*)

Explanatory Report is mere sophistry, designed to mask the fact that GMA 14 did its work by creating a different DFC for each aquifer in each county. The existence of the statement in Section 3.1 indicates that the districts were aware of the requirements of the statute, but have tried to gloss over their failure to follow the command of the Legislature.

IV.
THE ADOPTED DFCS FAIL TO PROTECT PRIVATE PROPERTY RIGHTS

45. In violation of Texas Water Code Section 36.018(d)(7), the districts of GMA 14, including the District, failed to consider properly the impact of the proposed DFCs on private property, including ownership and the rights of management area landowners and their lessee and assigns in groundwater. The Explanatory Report notes at page 27 that "the two overriding policy justifications for the DFCs adopted by GMA 14 are socioeconomic considerations and impacts on private property rights." At page 28 of the Explanatory Report, the districts admit that "[t]he primary economic and private property impact analyses that were considered by the GMA 14 District Representatives that justify the adoption of the DFCs were the impacts of those DFCs on **the economic costs to landowners of producing groundwater**. The evidence clearly indicates that economic considerations, and their inseparability from protection of private property rights, are the controlling factor behind the selection of the adopted DFCs." (Emphasis in

original). The Explanatory Report then attempts to tie this supposed economic harm incurred by the favored few to a secondary concern for "subsidence" that might be caused by increased production. The analysis is flawed and fails for several reasons.

46. *First*, in its Explanatory Report, GMA 14's consultants treat well operating costs as if those costs constitute a protected private property interest — which they are not. Unlike the private ownership of groundwater in place, well owners have no constitutionally protected right to operate their wells at a lower cost.

47. *Second*, and perhaps of the greatest constitutional concern, is the GMA 14's focus on maintaining artesian pressure for the benefit of some (principally existing) well owners results in confiscating the private property interest in groundwater from many in order to confer a cost-based benefit on some. GMA 14 acknowledges that it must "strike a balance between all of the[] property interests." (*See* Explanatory Report at 92). But the correlative rights of those who own the groundwater are disregarded by the districts. The GMA 14 approach adopted by the District, is, in effect, a *de facto* historic use program that disadvantages groundwater rights owners except those who currently produce groundwater. This approach to regulation was examined in *Bragg v. Edwards Aquifer Authority,* 421 S.W.3d 118 (Tex. App.—San Antonio, writ denied), and

found to result in a taking of private property without compensation, in derogation of the constitutional protections afforded to owners of constitutionally-protected private property. The District's approach is actually worse than *Bragg* because it amounts to a taking of private property for *private* purposes, which is not allowed in Texas. *See* TEXAS GOV'T CODE § 2206.001, *et seq.* DFCs that result in unconstitutional takings are unreasonable as a matter of law.

48. *Third*, the District's DFCs have and will result in rules that deprive groundwater rights owners in Montgomery County of their fair opportunity to produce a fair share of the groundwater beneath the county. "Conspicuously absent in [GMA 14's] balance, is the consideration of a groundwater owner's legal right to 'drill for and produce the groundwater below the surface of real property' as stated in Texas Water Code Section 36.002(b)(1), and the requirement that groundwater [conservation] districts pass rules that are 'fair and impartial' (Texas Water Code Section 36.101(a)(2))." (Ex. K, Harden Aff. at ¶ 23).

49. The Texas Supreme Court has held that groundwater rights owners are entitled to produce a fair share of the groundwater in an aquifer. *Day,* at 830. This is in accord with well-settled law in the oil and gas area. *See Railroad Commission v. Shell Oil,* 380 S.W.2d 556 (Tex. 1964); *Railroad Commission v. Williams,* 356 S.W.2d 131 (Tex. 1961). *See also, Elliff v. Texon Drilling Co.* 210 S.W.2d 558, 562 (1948) ("[O]ur courts, in decisions involving well-spacing regulations of our

Railroad Commission, have frequently announced the sound view that each landowner should be afforded the opportunity to produce his fair share of the recoverable oil and gas beneath his land....").

50. "The Explanatory Report authors' chief mistake is a failure to recognize [the] well established principle that groundwater is a private property and every owner of a common reservoir is to be provided a fair share opportunity to use their property." (Ex. K, Harden Aff. at ¶ 23). The statement in the Explanatory Report that "[t]he amount of groundwater located under the geographic area defined by GMA 14 is ultimately not a controlling consideration" (Explanatory Report at 28) is an example of the District's unconstitutional thinking about private property rights and failure to ensure landowners' have the opportunity to produce a fair share of groundwater in place. Every landowner has different economics; but each owner must be allowed to produce a fair share of the groundwater in place. Those groundwater rights are a controlling consideration under the statute. Each owner must comply with well spacing and production allocation rules that apply to their property. If every landowner in Montgomery County were allowed a fair opportunity to produce their groundwater, they will make the economic decision to produce or not.

51. *Fourth*, the Explanatory Report fails to make any study or analysis, much less quantify, the cost to the current producers to lower pumps or drill deeper

wells. For example, on page 90, the Explanatory Report authors state that "GMA 14 District Representatives had *discussions of qualitative* socioeconomic impacts that *may* result from the proposed DFCs." (emphasis added). Thus, the GMA 14 District Representatives, including the District's representative, Ms. Jones, conducted no scientific analysis of the actual costs of production of groundwater, and instead simply assumed greater amounts of groundwater production are not possible because costs and impacts will be "huge." (*See, e.g.,* Explanatory Report at 29).

52. "Loss of artesian pressure" relates only to the amount of lift work that must be performed to bring well water to the surface and related well engineering required to achieve and maintain it. Lift work is performed by a water pump located downhole in virtually all water wells of any significant production, artesian or otherwise. Lift is a minor and secondary component of total costs and a routine part of well engineering, maintenance and upgrading with time. The cost to lift 1 acre-foot of water 100 feet is about $15.00. (Ex. K, Harden Aff. at ¶ 21). The lift costs to supplement artesian pressure are *small* in comparison the value of private groundwater rights over which the District is riding roughshod.

53. Further, the Explanatory Report fails to analyze or quantify the market value of all the groundwater in storage put "off limits" by the District's DFCs. Every owner of groundwater rights is damaged by the District's actions because all

groundwater in storage—all 180 million acre feet—has been condemned by the District's actions and become valueless. If that groundwater is valued at the cost of surface water from San Jacinto River Authority, then the DFCs and resulting regulatory rules effectively condemn billions of dollars of groundwater. Given the magnitude of this harm, it is hard to imagine that the cost to current producers of lowering pumps or drilling new wells outweighs the economic loss to all other groundwater rights owners. But again, the Explanatory Report fails to quantify either cost.

54. In an attempt to achieve its DFCs, the District has adopted (and will be required to continue to enforce) rules regarding production of groundwater that are much more restrictive than those of neighboring districts. The DFCs and rules adopted by the District prevent any use of groundwater in storage under Montgomery County, a resource that belongs to the landowners and groundwater rights owners. As a result, groundwater in storage in Montgomery County will be captured by production from wells outside the County's boundaries. This drainage of privately-owned real property will be the result of the actions of the District, a governmental entity, without compensation to Plaintiffs. Moreover, the lack of ability to offset drainage and the lower production limits, together and separately, have caused and will cause a diminution in the fair market value of all groundwater

rights in Montgomery County. None of these factors are considered in the frighteningly shallow analysis presented in the Explanatory Report.

55. As a second justification for the District's DFCs, the Explanatory Report relies on supposed "economic costs" caused by subsidence in GMA 14. Nevertheless, the Report fails to recognize that the greatest volume of groundwater in storage in Montgomery County is found in the Jasper Aquifer, where most current pumping also takes place.[11] The Jasper Aquifer is not susceptible to subsidence. (Ex. K, Harden Aff. at ¶ 22 & Ex. 16 (pp. 2-3)). "The Explanatory Report authors [] do not consider the different geohydrologic characteristics, relating to subsidence, of the common reservoirs within GMA 14 and Montgomery County." (Ex. K, Harden Aff. at ¶ 22) Thus, from a factual standpoint, the rationale for LSGCD's DFCs is fundamentally wrong.

56. The Explanatory Report references several studies of historical costs of subsidence, but the areas of these past studies are located entirely in the Harris-Galveston and Fort Bend Subsidence Districts. "The areas of the greatest projected land-surface subsidence from 2010 through 2070 are located within Fort Bend

[11] As depicted on page 2 of Exhibit 16 to Mr. Harden's Affidavit, the total land-surface subsidence is dramatically less in Montgomery County than in Harris, Galveston and Fort Bend Counties. "It is also evident that much of Montgomery County is projected to never experience any land-surface subsidence. There are scientific reasons for this. ... This means that larger amounts of subsidence, such as historically occurred in Harris and Galveston counties and projected to occur in the future in Fort Bend County, will never occur in Montgomery County and will not occur in the future due to natural conditions present." (Ex. K, Harden Aff. at ¶ 22 & Ex. 16).

Subsidence District. These projected amounts of future land-surface subsidence were considered by Fort Bend Subsidence District in detailed regulatory planning activities." (*Id.*) The Fort Bend Subsidence District strikes a balance between the costs of subsidence and the benefits of greater groundwater supply. (*Id.*) In stark contrast, GMA 14 conducted no such cost-benefit study. (*Id.*) GMA 14 conducted the reverse-engineered modeling activity and then stated any greater amounts of reduction of artesian pressure are not allowed because any greater amounts of subsidence do not properly protect private property rights. (*Id.*)

57. The Explanatory Report's superficial justifications are demonstrably wrong. Because the District's DFCs result in a prohibited taking of private property, they are unreasonable as a matter of law.

V.
GMA 14 DID NOT CONSIDER THE BOARD'S TERS

58. In violation of Section 36.108(d)(3), GMA 14 disregarded the Board's TERS for Montgomery County in establishing the DFCs. (*See, e.g.*, Explanatory Report at 81) (claiming that "TERS has no practical application in the GMA 14 joint-planning process or in groundwater management of the Gulf Coast Aquifer System.").

59. The District commenced its attack on the Board's TERS Report within the same month the Board's Report was released. The problem with the TERS Report was that it proved that the District's repeated cries of a groundwater

shortage in Montgomery County were false. The TERS Report undercut the entire basis for the District's Regulatory Plan, the purposes of which apparently were to justify the District's existence and force the Cities and other large groundwater users in Montgomery County to pay for the San Jacinto River Authority's large, new, unnecessary surface water treatment plant at Lake Conroe, and the associated overbuilt pipeline infrastructure.

60. On June 27, 2014, the District issued a press release, which correctly stated that the Board's TERS Report estimated the recoverable groundwater in storage under Montgomery County as between 45 *million* acre feet if only 25% of the water is recovered, and 135 *million* acre feet if 75% is recovered. (*See* Ex. K, Harden Aff., Ex. 12 thereto). Contrast these Board estimates with the District's Management Plan, which caps groundwater production at a maximum of only 64 *thousand* acre-feet per year. Thumbing its nose at the Board, the District's press release announced to the Cities and Montgomery County's residents that "the very large water volumes provided in the TERS have limited to no applicability for the Lone Star GCD's setting of management goals for the aquifers underlying Montgomery County." (*See id.*). In violation of Section 36.108(d), the District clearly carried its arrogant, dismissive attitude toward the Board's TERS into GMA 14's planning process, and from there into the DFCs for Montgomery County proposed by GMA 14 and adopted by the District. The GMA 14 and the

District have utterly disregarded the statutory command of Section 36.108(d-2) that DFCs "*must* provide a balance between *the highest practicable level of groundwater production* and the conservation, preservation, protection, recharging, and prevention of waste of groundwater and control of subsidence in the management area."

61. The District (and other districts of GMA 14) do not properly understand how aquifer storage works. (Ex. K, Harden Aff. at ¶ 20). "It is a well-known and established principle that groundwater in storage must first be reduced in the production of groundwater to move recharge to wells." (*Id.* & Ex. 6 thereto). GMA 14 did not consider the value of additional reduction of storage for sustaining groundwater supplies. (*Id.*) GMA 14 made no analysis of the change in aquifer storage in the common reservoirs either historically or that could be expected in the future. (*Id.*) "The lack of these studies and considerations is clear indication the DFCs were not developed using the most basic considerations of groundwater hydrology and do not comply with Section 36.0015 of the Texas Water Code which requires the use of the best available science." (*Id.*)[12]

62. A recent report by the Bush School of Government and Public Service to the Texas State Comptroller of Public Accounts (Exhibit J hereto, attaching Bush School, *Reorganizing Groundwater Regulation in Texas* at 2 (May 12, 2016))

[12] *See also* Ex. K, Harden Aff. at ¶ 20 & Exs. 13 & 14 thereto.

highlights the unreasonableness of the District's DFCs for Montgomery County. After analysis of the Board's TERS Reports, other information, and interviews with GCD staffs, the Bush School concludes that "there is a relative abundance of groundwater in all but two of the state's major aquifers, and that a review of the regulatory practices of the local GCDs supported the conclusion that Texas has a regulation-induced shortage of groundwater." (*Id.*) Neither of the two Texas aquifers in which there is limited groundwater are within GMA 14; one, the Ogallala, serves the Texas Panhandle, and the other, the Hueco-Mesilla, is in the El Paso area. For the Gulf Coast Aquifer, including the Jasper, Chicot, and Evangeline aquifers in GMA 14, the Bush School reports that assuming consumption levels at the current rate and that only 50% of the TERS is recoverable, the supply of groundwater is *unlimited*. The supply remains *unlimited* even if one assumes consumption continues to grow at its historical rate. If one continues to assume that only 50% of TERS is recoverable but assumes that consumption grows at an annual rate of 2 percent, the Gulf Coast Aquifer will supply groundwater for 200 years. (*See* Ex. J, Bush School Report at 3) The Gulf Cost aquifer has been, is and realistically will remain full for the foreseeable future without any restriction on use. These projections stand in stark contrast to the false claims by the District (and the San Jacinto River Authority), parroted by GMA 14's DFCs for Montgomery County, that the Gulf Coast Aquifer is rapidly

depleting and groundwater production by the Cities and other large groundwater users in Montgomery County should be severely limited.

63. By statute, the districts in GMA 14 are required to consider the total estimated recoverable storage ("TERS") in an aquifer before voting on DFCs. The District failed to actually consider the total estimated recoverable storage of the aquifers in question. In fact, Section 5.3 of the Explanatory Report admits that the Districts ignored the TERS report because of "the negative socioeconomic impacts of subsidence." But subsidence is not relevant to the Jasper Aquifer, so ignoring the TERS is not reasonable as to that aquifer. Because of the geometry between the aquifer outcrop and southeasterly dip of the Evangeline and Chicot aquifers, subsidence in Montgomery County will forever be less of a concern than in neighboring Harris, Galveston, and Fort Bend Counties.

64. The adopted DFCs are artificially and adversely impacted by the failure to consider the Board's TERS. Because the DFCs do not address aquifer storage, the rights of groundwater owners in the District's boundaries are adversely impacted.

VI.
GMA 14'S REVERSE ENGINEERING OF DFCs FAILS TO MEET STATUTORY REQUIREMENTS

65. The Explanatory Report reveals that GMA 14 failed to meet several other statutory criteria that Texas law requires to be considered as part of the DFC

process. Further, the Explanatory Report is not based on the type of analytical process contemplated or required under Texas Water Code Section 36.108.

66. It appears that DFCs were not established by first considering and identifying critical levels of springflow protection, depletion of storage, subsidence, and other balancing factors such as protection of private property rights. Instead, the DFCs adopted by the District reflect only the District's self-imposed and arbitrary restriction of groundwater production in Montgomery County to 64,000 acre-feet per year, that lacks any technical basis.

67. It appears that the District's Board expressly determined its DFCs for the Gulf Coast aquifers on the assumption that the Modeled Available Groundwater ("MAG") would consist of only recharge which occurs within Montgomery County. The District's 64,000 acre-fee per year was assumed as MAG and distributed between the different strata of the Gulf Coast aquifer. These assumptions for determining DFCs ignores the best available science and ignores how recharge works in the individual strata of the Gulf Coast aquifer. Take for example the Jasper aquifer. If you consider only the outcrop of the Jasper that overlies Montgomery County (4,300 acres) and make the same assumptions that the District made about the amount of recharge (1.1 inch per acre per year), the resulting recharge (MAG) for the Jasper would be only 390 acre feet. Yet, the MAG for the Jasper aquifer in Montgomery County which results from the DFCs

adopted by GMA 14 is 24,000 acre-feet per year. Thus, the MAG for the Jasper under the District's DFCs is not based on even the simplistic "science" used by that the District to design its regulatory scheme or its DFCs.

68. The District's recharge rate is scientifically flawed also because it assumes recharge only occurs within the boundary of Montgomery County. However, it is commonly known that recharge enters the aquifers in the aquifer outcrops, and that the Gulf Coast aquifer outcrops extend across Montgomery County and numerous other counties. (Ex. K, Harden Aff. at ¶¶ 13-15 & Ex. 5 thereto; *also id.* at 18 & Exs. 7-8 thereto). For Montgomery County and surrounding areas, the publicly-available Houston Area Groundwater Model ("HAGM") is used by State and local agencies for regulatory and water planning purposes. Analysis using the HAGM indicates that groundwater production in Montgomery County receives recharge from an area much larger than Montgomery County. (*Id.* at ¶ 18 & Ex. 7 thereto) Similarly, the Board maintains a groundwater database that contains historical water levels in wells. Mapping of water levels from the Board's data indicates the pressure gradients of production in Montgomery County span an area much larger than Montgomery County. As discussed above, the Board estimates total storage in Montgomery County alone is about 180 million acre-feet and about 3 billion acre-feet in GMA 14.

69. The District provided the GMA 14's consultants with its policy-driven and unscientific production restriction as the "demand" those consultants input into their model. The administrative record clearly reveals the sequence of actions taken by the District and GMA 14. (*See* Harden Aff. at ¶ 19 & Exs. 9-10 thereto) (The activities conducted by GMA 14 are itemized by date in a timeline on pages 30-34 of Exhibit 10 to Mr. Harden's Affidavit). Using the District's 64,000 acre-feet/year demand figure — the DFCs for Montgomery County were predetermined approximately one year before their adoption, and long before GMA 14 had completed the majority of the statutory criteria set forth in Section 36.108. (*See id.*) The reverse-engineered approach employed by GMA 14, and the District's representatives, "does not follow a normal scientific approach of considering groundwater hydrology principles concerning aquifer management concerns, within a common basin, prior to establishing aquifer management criteria." (*Id.*)

70. Historical analysis using the HAGM indicates less than 1% of the pre-development storage has been reduced in the Gulf Coast aquifer system in southeast Texas. This is after 100 years of groundwater use. Therefore, the existing data indicates clearly that the aquifer is not being depleted nor are wells running dry.

71. Recharge is not a static number, but rather, is a dynamic rate that varies with changes in aquifer storage. (Harden Aff. at 20 & Exs. 6 & 13). And

the so-called "sustainable production" rate in the Gulf Coast aquifer system does not equal a recharge rate. In 1940, Dr. Charles V. Theis authored a well-respected groundwater paper titled "The Source of Water Derived from Wells." (*See* Ex. K, Harden Aff. at Ex. 6 thereto). Dr. Theis describes how prior to pumping, an aquifer is in a state of "dynamic equilibrium," which means that while groundwater continuously flows through the system, the aquifer is essentially full and there are no significant changes in aquifer storage over time. (*Id.*) Aquifer storage must be reduced to some extent before recharge is available for use by wells. (*Id.*)

72. It is a misconception that if production is limited to a supposed recharge rate, then water level declines (changes in artesian pressure or water table levels) will not occur. But the historical change in water levels in wells in Montgomery County reflect changes in artesian pressure in the aquifer sands and do not represent significant drainage or depletion of groundwater stored in water table areas. (Ex. K, Harden Aff. at ¶¶ 7-8).

73. GMA 14 failed to provide an explanatory report for each DFC for each aquifer in each groundwater conservation district of GMA 14 as required by statute. The alleged justifications for the adopted DFCs wholly fail to address each aquifer separately, and the justifications set forth in the Explanatory Report either do not apply to all aquifers, or do not apply in the same manner to all aquifers.

74. The Cities reserve the right to expand on these reasons and prove additional reasons after discovery, and in the contested case hearing.

VII.
REQUESTED RELIEF

75. The Cities request the District contract with SOAH to conduct a hearing with respect to the reasonableness of the DFCs adopted by the District, and to perform the other duties required of it pursuant to Texas Water Code Section 36.1083.

76. The Cities request the District forward a copy of this Petition to the TWDB, pursuant to Section 36.1083(e).

77. The Cities request the TWDB conduct an administrative review pursuant to Section 36.1083(e)(1) and a study containing scientific and technical analysis of the DFCs pursuant to Section 36.1083(e)(2), which shall be delivered to SOAH within the time period specified in Section 36.1083(f). The Cities request the TWDB to direct its members, employees, and staff to refrain from communicating with the parties, their agents, attorneys, witnesses, and representatives, including Mr. Mullican and the consultants involved in preparing the questioned DFCs or the Explanatory Report.

78. On information and belief, the District and its consultants are in possession, custody or control of documents and information that pertain to the production of the Explanatory Report, but which have been withheld. Since June

2016, Conroe has been seeking, through the Texas Public Information Act, data from the groundwater conservation districts in GMA 14, including Lone Star, related to the preparation of the Explanatory Report. Conroe has paid Lone Star's estimated fee for such data, but the District and GMA 14's consultant, William Mullican, have asserted exceptions to the general rules requiring public disclosure. The Cities request the District make all such records available to the Cities within a reasonable time after the filing of this Petition so that the Cities have a reasonable time to determine whether the District's production is complete, analyze it with expert assistance, and likely take depositions about it, before the Cities can be ready for trial in this matter. If the District and Mr. Mullican refuse to do so, the Cities request SOAH to order that production and require the District and Mullican to pay the Cities' costs.

79. On page 10 of the Explanatory Report it states that "groundwater data was obtained from the TWDB, which maintains records and reports of groundwater use, water wells and other relevant data." The Cities request the TWDB make all such records available to the Cities within a reasonable time after the filing of this Petition so that the Cities have a reasonable time to analyze it with expert assistance, and possibly take depositions about it, before the Cities can be ready for trial of this matter.

80. The Cities request SOAH to conduct all pre-hearing conferences, discovery matters, and contested case hearing pursuant to Texas Water Code Section 36.1083 and consistent with the procedural rules of the office and all other applicable laws.

81. The Cities pray that upon final hearing hereof, the duly appointed administrative law judge for SOAH find that Lone Star Groundwater Conservation District's Desired Future Conditions adopted on August 9, 2016 are unreasonable and grant all other relief to which the Cities are entitled under Texas Water Code Section 36.1083 and other applicable laws, together with their reasonable attorneys' fees and costs of Court.

Dated: December 1, 2016

Respectfully submitted,

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ATTORNEYS FOR THE
CITY OF CONROE AND MAGNOLIA, TEXAS

APPENDIX

Exhibit A: LSGCD Resolution No. 16-006

Exhibit B: Letter, May 5, 2015, from the City of Conroe, Texas to GMA 14 (5/5/2015), with attachments

Exhibit C: Letter, August 25, 2015, Marvin W. Jones to Ms. Kathy Jones, et al., Re: Groundwater Management Area 14

Exhibit D: Letter, September 14, 2015, Michael V. Powell to Mr. Richard J. Tramm, Re: Lone Star Groundwater Conservation District's Public Hearing on Desired Future Conditions, call for September 17, 2015

Exhibit E: Minutes of June 14, 2016 Meeting of Board of Directors of Lone Star Groundwater Conservation District

Exhibit F: GMA 14'S "Resolution Establishing Administrative Procedures for the Consideration, Proposal and Adoption of Desired Future Conditions for Groundwater Management Area 14," adopted November 18, 2014

Exhibit G: GMA 14's Resolution 2016-01-01, "Resolution for the Approval of Desired Future Conditions for All Aquifers in Groundwater Management 14," adopted April 29, 2016

Exhibit H: TWDB Memorandum dated March 10, 2010

Exhibit I: Certified copy of TWDB's report titled "GAM Task 13-037: Total Estimated Recoverable Storage for Aquifers in Groundwater Management Area 14" published June 9, 2014

Exhibit J: Declaration of James Griffin, attaching The Bush School, *Reorganizing Groundwater Regulation in Texas* at 2 (May 12, 2016)

Exhibit K: Affidavit of Robert D. Harden, including Exhibits 1-17 attached thereto